

Title (en)  
SHIELDING AGAINST LASER BEAMS

Title (de)  
ABSCHIRMUNG GEGEN LASERSTRAHLEN

Title (fr)  
ECRAN DE PROTECTION CONTRE DES RAYONS LASER

Publication  
**EP 1159104 A1 20011205 (DE)**

Application  
**EP 00918675 A 20000225**

Priority  
• DE 0000531 W 20000225  
• DE 19908630 A 19990227

Abstract (en)  
[origin: DE19908630A1] When a workpiece (1) is perforated by means of a laser beam (2), a shielding (4) is arranged behind the opening (3) that is to be produced by said laser beam. The shielding (4) is arranged in the direction of the beam. The laser beam is destructured on said shielding (4) by means of scattering, reflections and/or absorption within a greater volume or in a greater optical path length. Workpiece areas (1'') or machine parts are thus protected behind the shielding (4).

IPC 1-7  
**B23K 26/18**; **B23K 26/00**

IPC 8 full level  
**B23K 26/00** (2014.01); **B23K 26/18** (2006.01); **B23K 26/38** (2006.01); **B23K 26/382** (2014.01); **B23K 26/402** (2014.01); **B23K 26/42** (2006.01); **B23K 26/70** (2014.01)

CPC (source: EP)  
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Citation (search report)  
See references of WO 0051778A1

Cited by  
CN106457476A; US10252931B2; US11111170B2; WO2015094898A3; US10752534B2; US11648623B2; US10730783B2; US11130701B2; US9850159B2; US10626040B2; US11078112B2; US9815730B2; US9850160B2; US10392290B2; US10522963B2; US10611667B2; US11542190B2; US11773004B2; US9676167B2; US10047001B2; US10179748B2; US11014845B2; US10421683B2; US11028003B2; US11345625B2; US11774233B2; US10144093B2; US10293436B2; US11148225B2; US10173916B2; US10335902B2; US10442719B2; US10597321B2; US10377658B2; US10525657B2; US10526234B2; US11062986B2; US9815144B2; US10688599B2; US11186060B2; US11697178B2; US9701563B2; US10183885B2; US10233112B2; US10280108B2; US10611668B2; US11114309B2; US11713271B2

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